



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,946	10/29/2003	Masakazu Ogasawara	041465-5209	6143
55694 7590 04/16/2007 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209			EXAMINER BIBBINS, LATANYA	
			ART UNIT	PAPER NUMBER
			2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,946	OGASAWARA, MASAKAZU	
	Examiner	Art Unit	
	LaTanya Bibbins	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. In the remarks filed on January 8, 2007, Applicant amended claims 1, 6, 7, 10, and 12-14, cancelled claims 8 and 9, and submitted arguments for allowability of pending claims 1-7, and 10-14.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7, and 10-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 6 and 12 respectively recite a multilayer type information recording medium and a recording and reproducing apparatus which uses such a recording medium both comprising a plurality of adjustment layers located continuously to the plurality of information recording layers toward the lead-in area.

It is unclear, based on the claim language (read in light of the specification), exactly where applicant intends for the plurality of adjustment layers to be located in relationship to the plurality of information recording layers and the lead-in area.

Art Unit: 2627

Therefore, in the interest of compact prosecution, claims 6 and 12 are being interpreted as a multilayer type of information recording medium and a recording and reproducing apparatus which uses such a recording medium with a plurality of adjustment layers located between the single corresponding-information recording layer and the plurality of information recording layers.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Asada (EP 1,187,110 A1) in view of Sako et al. (US Patent Number 6,728,174 B1).

Regarding claim 1, Asada discloses a multilayer type of information recording medium (see column 3 paragraph [0016] and Figure 1A) comprising: a plurality of information recording layers into each of which information is recordable (see column 3 lines 39-42); and a single corresponding-information recording layer into which information corresponding to the information recorded in the information recording layers is recordable (see column 5 lines 10-13). Asada fails to disclose, that in a lead-in area of the information recording medium, only the single corresponding-information recording layer has a reflection layer, and each of the information recording layers has no reflection layer.

Sako, however, discloses a multilayer type of information recording medium (see the first and second recording layers of Figure 1, elements 4 and 6 respectively) wherein, in a lead-in area of the information recording medium, only the single corresponding-information recording layer has a reflection layer, and each of the information recording layers has no reflection layer (see column 9 lines 29-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the multilayer disc structure of Sako into the multilayer information recording medium of Asada. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to produce a recording medium such "the control data recorded on the lead-in area can be read out to high precision" (Sako column 9 lines 40-43)

Regarding claim 2, Asada discloses a multilayer type of information recording medium, wherein the corresponding information is control information for controlling either recording or reproduction of the information into and from each of the information recording layers (see column 4 lines 16-22).

Regarding claim 3, Asada discloses a multilayer type of information recording medium, wherein the corresponding-information recording layer is provided with a reflection layer to reflect an optical beam radiated to optically read the corresponding information (see column 3 lines 29 and 30 and Figure 1A element 13).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asada (EP 1,187,110 A1) and Sako et al. (US Patent Number 6,728,174 B1) as applied to claim 3 above, and further in view of Horita (US Patent Number 6,469,965 B1).

Regarding claim 4, Asada in combination with Sako disclose a multilayer type of information recording medium (see column 3 paragraph [0016] and Figure 1A). Further, Asada teaches that the layer information region can be formed on either the first or second recording layers (see paragraph [0032]). Asada and Sako, however, fail to teach a distance from a beam-incidence-side surface of the medium to the corresponding information recording layer is the same as a distance from a beam-incidence-side surface of a monolayer type of information recording medium provided with a single information recording layer for recording the information to the single information recording layer. Horita, on the other hand, teaches a single layer disc (see column 5 lines 48-50 and Figure 3B) and a multilayer disc (see column 5 lines 65-67 and Figure 3C) with recording layers formed at a distance of 0.6 mm from the disc face (a laser beam entrance surface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multilayer information recording medium of Asada and Sako while implementing the layering strategy of Horita. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to reproduce sounds high in quality (see Horita column 6 lines 32 and 33).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asada (EP 1,187,110 A1), Sako et al. (US Patent Number 6,728,174 B1), and Horita (US Patent Number 6,469,965 B1) as applied to claim 4 above, and further in view of Yasuda et al. (US Patent Number 6,221,455 B1).

Regarding claim 5, Asada, Sako, and Horita teach a multilayer type of information recording medium but fail to teach that the distance from the beam-incidence-side surface of the medium to the corresponding-information recording layer is 100 μ m. Yasuda, however, teaches a multilayer type of information recording medium (Figure 1 element 1) with a first information recording layer (Figure 1 element 6) and a light-transmitting layer (Figure 1 element 7) whose laser light is illuminated from the light-transmitting layer in order to record and/or reproduce information signals (column 4 lines 58-65). Yasuda also teaches a thickness of the light-transmitting layer set to 10 to 177 μ m (column 6 lines 5 and 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multilayer type of information recording medium of Asada, Sako, and Horita with the layering strategy of Yasuda. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in consideration that a range of laser light from the currently used red laser to the blue laser expected to be used in the future is to be dealt with (Yasuda column 6 lines 2-4).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asada (EP 1,187,110 A1) and Sako et al. (US Patent Number 6,728,174 B1) as applied to claim 3 above, and further in view of Kitaura et al (US PGPub Number 2002/0122366 A 1).

Regarding claims 6, Asada and Sako disclose a multilayer type of information recording medium comprising a single corresponding-information recording layer (see column 5 lines 10-13) and a plurality of information recording layers (see column 3 lines 39-42). Asada and Sako, however, fail to teach a plurality of adjustment layers located between the single corresponding-information recording layer and the plurality of information recording layers. Kitaura, on the other hand, teaches adding at least one reflectance adjustment layer to the information layer and that the reflectance adjustment layer can be composed of a plurality of sub-layers (paragraph [0014]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate at least one reflectance adjustment layer, as taught by Kitaura, into the multilayer information recording medium of Asada and Sako. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings so that a reflectance after recording is lower than that before recording (Kitaura paragraph [0014]).

10. Claims 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iida (US Patent Number 6,424,605 B1) and further in view of Asada (EP 1,187,110 A1) and Sako et al. (US Patent Number 6,728,174 B1).

Regarding claim 7, Iida discloses an information recording and reproducing apparatus for selectively recording or reproducing information into or from an information recording layer consisting of either a signal information recording layer of a monolayer type of information recording medium or one of a plurality of information

Art Unit: 2627

recording layers of a multilayer type of information recording medium, the apparatus comprising: a first setting device (Figure 3 element 30) configured to initialize operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the monolayer type of information recording medium (column 12 lines 26-31 and Figure 9 steps S101 and S102); a determination device (Figure 3 element 30) configured to determine whether or not an information recording medium loaded currently in the information recording and reproducing apparatus is the monolayer type of information recording medium or the multilayer type of information recording medium (column 11 lines 59-64), the determination being carried out after the initialization of the operating parameters (see Figure 9); a first recording/reproducing device (see column 7 lines 13 and 14) configured to start recording or reproducing the information into or from the information recording layer of the monolayer type of information recording medium (Figure 1A,) on the basis of the initialized operating parameters (column 12 lines 26-31), when the determination device (Figure 3 element 30) determines that the currently loaded information recording medium is the monolayer type of information recording medium; a second setting device (Figure 3 element 30) configured to change the operating parameters to be appropriate for either the recording or reproduction of the information into or from the information recording layer of the multilayer type of information recording medium, when the determination device determines that the currently loaded information recording medium is the multilayer type of information recording medium (column 14 lines 28-31); and a second recording/reproducing device (see column 7

Art Unit: 2627

lines 6 and 7) configured to start recording or reproducing the information into or from the information recording layer of the multilayer type of information recording (Figure 1C) medium on the basis of the changed operating parameters. Iida, however, fails to teach a multilayer type of information recording medium that comprises a single corresponding-information recording layer into which information corresponding to the information recorded in the information recording layers is recordable, wherein the corresponding-information recording layer is provided with a reflection layer to reflect an optical beam radiated to optically read the corresponding information.

Asada, on the other hand, teaches a multilayer type of information recording medium (see column 3 paragraph [0016] and Figure 1A) that comprises a single corresponding-information recording layer into which information corresponding to the information recorded in the information recording layers is recordable (see column 5 lines 10-13), wherein the corresponding information recording layer is provided with a reflection layer to reflect an optical beam radiated to optically read the corresponding information (see column 3 lines 29 and 30 and Figure 1A element 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the multilayer information recording medium of Asada in the information recording and reproducing apparatus of Iida. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to decrease the frequency of access to specific recording layers by knowing if recording in a specific recording layer is prohibited without adjusting the focal position (see Asada column 5 lines 47-53).

Asada and Iida fail to disclose, that in a lead-in area of the information recording medium, only the single corresponding-information recording layer has a reflection layer, and each of the information recording layers has no reflection layer.

Sako, however, discloses a multilayer type of information recording medium (see the first and second recording layers of Figure 1, elements 4 and 6 respectively) wherein, in a lead-in area of the information recording medium, only the single corresponding-information recording layer has a reflection layer, and each of the information recording layers has no reflection layer (see column 9 lines 29-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the multilayer disc structure of Sako into the multilayer information recording medium of Asada and Iida. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to produce a recording medium such "the control data recorded on the lead-in area can be read out to high precision" (Sako column 9 lines 40-43)

Claim 13 is drawn to the method of using the corresponding apparatus claimed in claim 7. Therefore, method claim 13 corresponding to apparatus claim 7 is rejected for the same reasons of obviousness as used above.

Claim 14 is drawn to a computer-readable recording medium for using the corresponding apparatus claimed in claim 7. Therefore, computer-readable recording medium claim 12 corresponding to apparatus claim 7 is rejected for the same reasons of obviousness as used above.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida (US Patent Number 6,424,605 B1), Asada (EP 1,187,110 A1) and Sako et al. (US Patent Number 6,728,174 B1), as applied to claim 7 above, and further in view of Horita (US Patent Number 6,469,965 B1).

Regarding claim 10, lida, Asada, and Sako fail to teach a distance from a beam-incidence-side surface of the medium to the corresponding-information recording layer is the same as a distance from a beam-incidence-side surface of a monolayer type of information recording medium provided with a single information recording layer for recording the information to the single information recording layer. Horita, on the other hand, teaches a single layer disc (see column 5 lines 48-50 and Figure 3B) and a multilayer disc (see column 5 lines 65-67 and Figure 3C) with recording layers formed at a distance of 0.6 mm from the disc face (a laser beam entrance surface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the multilayer information recording medium of lida, Asada, and Sako while implementing the layering strategy of Horita. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to reproduce sounds high in quality (see Horita column 6 lines 32 and 33).

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida (US Patent Number 6,424,605 B1), Asada (EP 1,187,110 A1), Sako et al. (US Patent

Number 6,728,174 B1), and Horita (US Patent Number 6,469,965 B1), as applied to claim 10 above, and further in view of Yasuda et al. (US Patent Number 6,221,455 B1).

Regarding claim 11, Iida, Asada, Sako, and Horita teach an information recording and reproducing apparatus, but fail to teach that the distance from the beam-incidence-side surface of the medium to the corresponding-information recording layer is 100 μ m. Yasuda, however, teaches a recording and reproducing apparatus with a multilayer type of information recording medium (Figure 1 element 1) with a first information recording layer (Figure 1 element 6) and a light-transmitting layer (Figure 1 element 7) whose laser light is illuminated from the light-transmitting layer in order to record and/or reproduce information signals (column 4 lines 58-65). Yasuda also teaches a thickness of the light-transmitting layer set to 10 to 177 μ m (column 6 lines 5 and 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the information recording and reproducing apparatus of Iida, Asada, Sako, and Horita with the multilayer type of information recording medium of Yasuda. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in consideration that a range of laser light from the currently used red laser to the blue laser expected to be used in the future is to be dealt with (Yasuda column 6 lines 2-4)

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida (US Patent Number 6,424,605 B1), Asada (EP 1,187,110 A1), Sako et al. (US Patent Number 6,728,174 B1), as applied to claims 7 above, and further in view of Kitaura et al (US PGPub Number 2002/0122366 A 1).

Regarding claims 12, lida, Asada, and Sako fail to teach a plurality of adjustment layers located between the single corresponding-information recording layer and the plurality of information recording layers. Kitaura, on the other hand, teaches adding at least one reflectance adjustment layer to the information layer and that the reflectance adjustment layer can be composed of a plurality of sub-layers (paragraph [0014]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate at least one reflectance adjustment layer, as taught by Kitaura, into the recording and reproducing apparatus of lida, Asada, and Sako. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings so that a reflectance after recording is lower than that before recording (Kitaura paragraph [0014]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

Art Unit: 2627

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LaTanya Bibbins



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER